

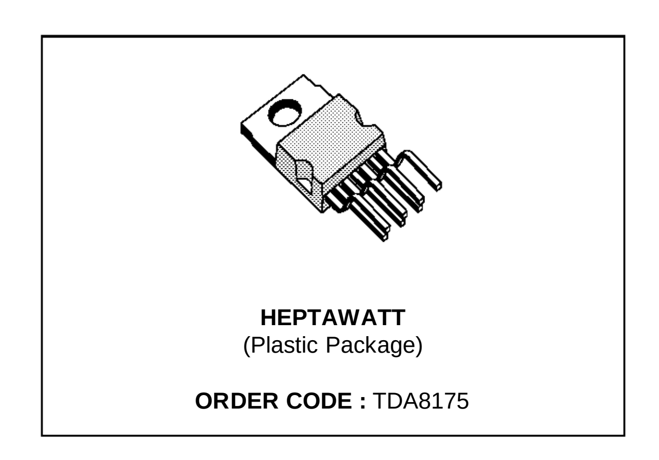
TDA8175

TV VERTICAL DEFLECTION OUTPUT CIRCUIT

- POWER AMPLIFIER
- FLYBACK GENERATOR
- AUTOMATIC PUMPING COMPENSATION
- THERMAL PROTECTION
- REFERENCE VOLTAGE

DESCRIPTION

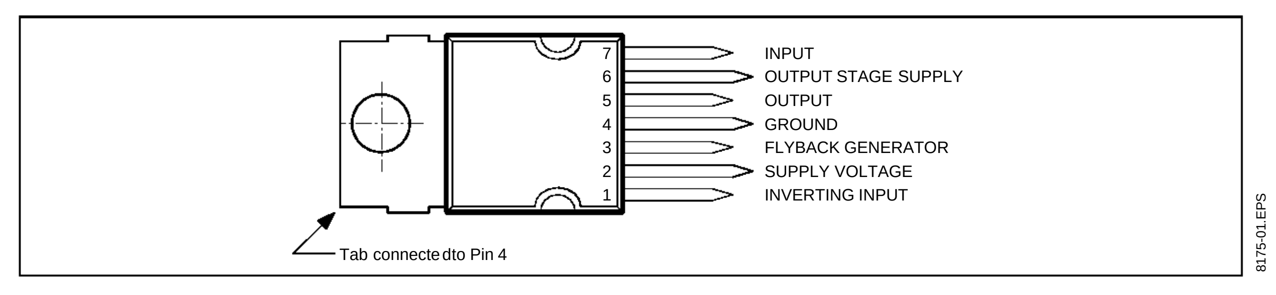
The TDA8175 is a monolithic integrated circuit in HEPTAWATT package. It is a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in Color and B & W television sets as well as in monitors and displays.



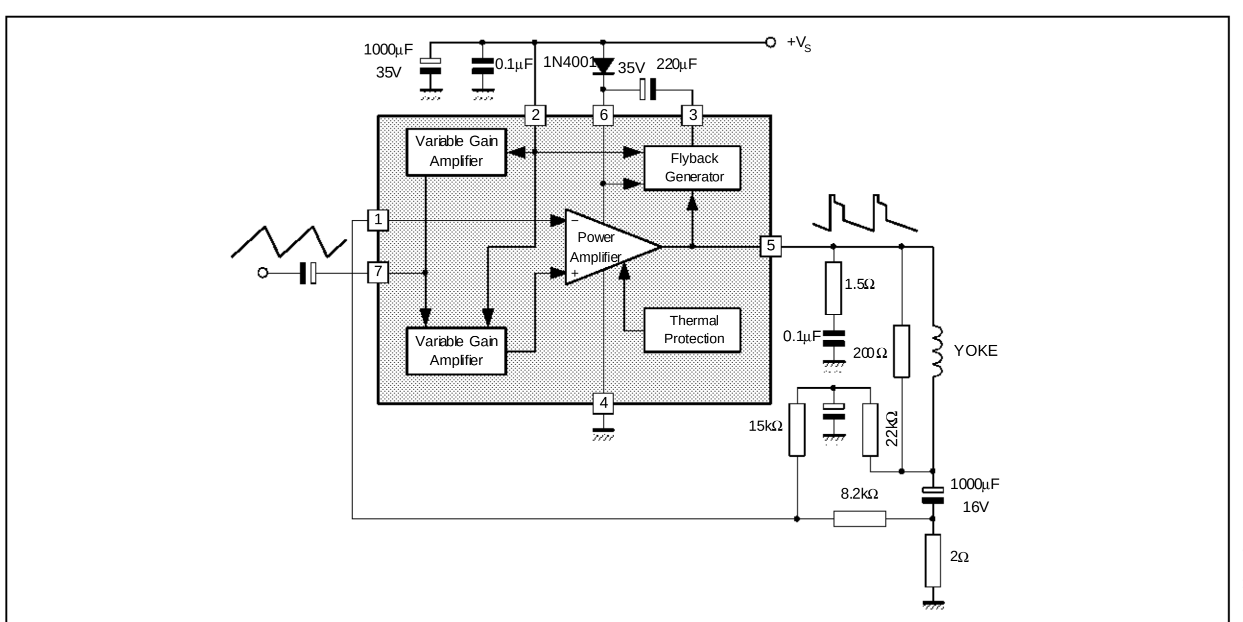
HEPTAWATT
(Plastic Package)

ORDER CODE : TDA8175

PIN CONNECTIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage (PIn 2)	35	V
V_5, V_6	Flyback Peak Voltage	60	V
V_3	Voltage at PIn 3	$+V_S$	
V_1, V_7	Amplifier Input Voltage	$+V_S$	
I_O	Output Peak Current (non-repetitive, t = 2ms)	2.5	A
I_O	Output Peak Current at : f = 50 or 60Hz, t ≤ 10μs f = 50 or 60Hz, t > 10μs	 3 2	 A A
I_3	Pin 3 DC Current at V5 < V2	100	mA
I_3	Pin 3 Peak-to-peak Flyback Current at f = 50 or 60Hz, t_{fly} ≤ 1.5ms	3	A
P_{tot}	Total Power Dissipation at T_{case} = 70°C	20	W
T_j, T_{stg}	Storage and Junction Temperature	-40, +150	°C

8175-01.TBL

THERMAL DATA

Symbol	Parameter		Value	Unit
$R_{th\ (j-c)}$	Junction-case Thermal Resistance	Max.	3	°C/W

8175-02.TBL

ELECTRICAL CHARACTERISTICS (V_S = 35V, T_{amb} = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_2	Pin 2 Quiescent Current			18	36	mA
I_6	Pin 6 Quiescent Current			16	36	mA
I_1	Amplifier Input Bias Current	V_1 = 1V		-0.1	-1	μA
V_3	Pin 3 Saturation to GND	I_3 = 20mA		1	1.5	V
V_5	Quiescent Output Voltage	V_S = 35V, R_a = 39kΩ		19		V
V_5	Output Saturation Voltage to GND	I_5 = 1.2A I_5 = 0.7A		1 0.7	1.4 1	V V
V_5	Output Saturation Voltage to Supply	$-I_5$ = 1.2A $-I_5$ = 0.7A		1.6 1.3	2.2 1.8	V V
V_O	Ramp Amplitude versus Voltage Supply	22V < V_S < 30V		4		%/V
G	AC Gain	V_S = 26V	0.54	0.61	0.67	V
V_O	DC Output Voltage Accuracy			8		%
V_7	Internal Bias			2.7		V
R_7	Input Resistance			50		kΩ
T_j	Junction Temperature for Thermal Shutdown			140		°C

8175-03.TBL

THERMAL PROTECTION

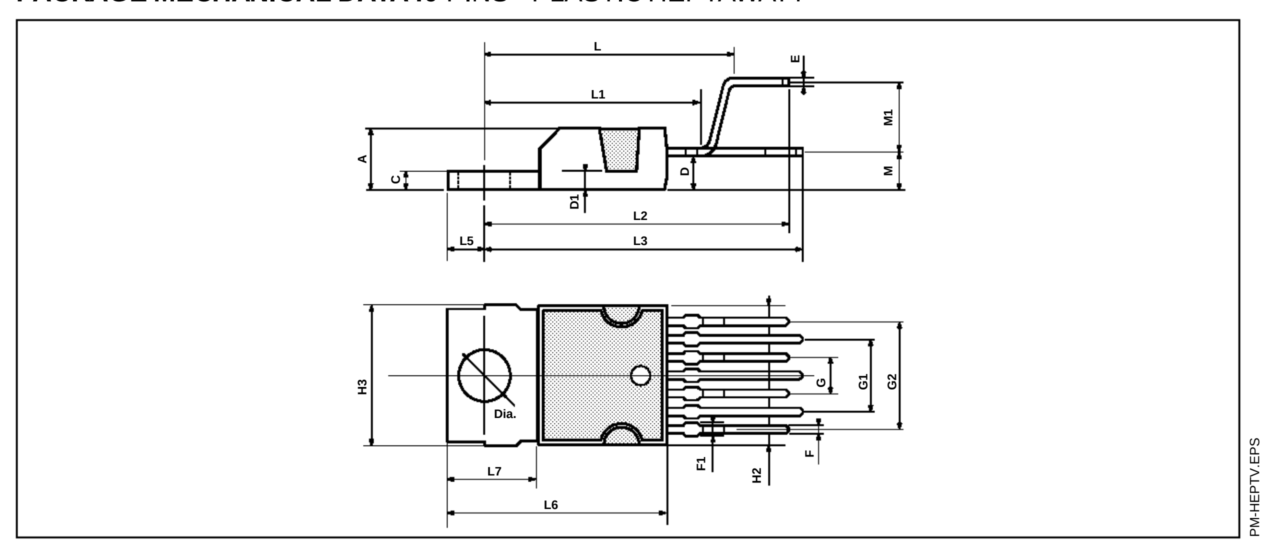
The thermal protection circuit intervenes when the die temperatures reaches 150°C and turns-off the output power device.

PUMPING COMPENSATION

The device incorporates a special preampliflier, the gain of which varies with changes in supply voltage. This function allows perfect compensation of height variations caused by changes in brightness.



PACKAGE MECHANICAL DATA : 9 PINS - PLASTIC HEPTAWATT



PM-HEPTV.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			4.8			0.189
C			1.37			0.054
D	2.4		2.8	0.094		0.110
D1	1.2		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
F	0.6		08	0.024		0.031
F1			0.9			0.035
G	2.41	2.54	2.67	0.095	0.100	0.105
G1	4.91	5.08	5.21	0.193	0.200	0.205
G2	7.49	7.62	7.8	0.295	0.300	0.307
H2			10.4			0.409
H3	10.05		10.4	0.396		0.409
L		16.97			0.668	
L1		14.92			0.587	
L2		21.54			0.848	
L3		22.62			0.891	
L5	2.6		3	0.102		0.118
L6	15.1		15.8	0.594		0.622
L7	6		6.6	0.236		0.260
M		2.8			0.110	
M1		5.08			0.200	
Dia.	3.65		3.85	0.144		0.152

HEPTV.TBL

